Reprinted from the 'Transactions of the Pathological Society of London,' 1888.

20 MAR 19
LIBRARY
Vol. xxxix. p. 200.
4.

Papilloma of both Fallopian tubes and ovaries.

By Alban Doran.

[With Plate XII.]

Mrs. R—, aged 31, shopkeeper, was admitted into the Samaritan Free Hospital in December, 1887, on account of a painful hypogastric tumour.

The catamenia appeared when she was fourteen; she was married at the age of nineteen. For four years after that date she continued in good health. The period was regular and copious, as before marriage, but she did not become pregnant. Seven years ago, when she was twenty-four, she was attacked with severe pelvic inflammation, and remained for nine weeks in the Royal Free Hospital under the care of Dr. Hayes, Physician for the Diseases of Women. A tumour was then noticed in the hypogastrium; the patient declared that it slowly disappeared. Since that illness the catamenia had been scanty, painful, and of only two days' duration. The patient did not become pregnant.

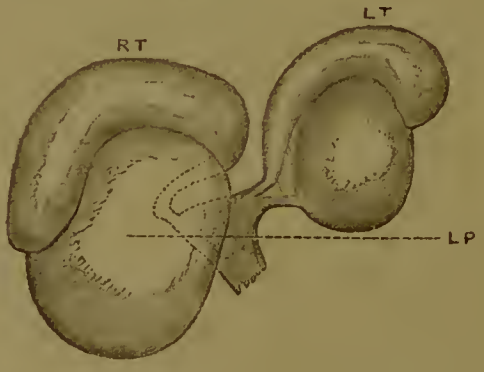
For twelve months before admission the patient was troubled with lumbar pains, abdominal swelling, and dysuria during the period, which persisted, it may here be remarked, notwithstanding the total disorganisation of both appendages and the absence of any signs of hæmorrhage in the fluid in the tubal cysts. Three months before admission, when she was under the care of Dr. Grigg, the tumour reappeared and slowly enlarged. The patient became unfit for business, and begged that it might be removed.

The patient was fairly nourished. The abdomen was not distended above, and there was resonance in the flanks. The hypogastrium was prominent, owing to the presence of a tumour which did not reach quite as high as the umbilicus, and extended downwards into the pelvis, pushing the cervix uteri against the left side of the pelvic cavity. Another tumour, much smaller, lay in the hypogastrium to the left of the middle line, hardly reaching the pubes; it was very freely movable, and felt like a pedunculated

subperitoneal fibroid. Both tumours felt elastic, like soft fibroids, fluctuation being, at least, very obscure. Diagnosis was extremely uncertain. An exploratory operation was decided upon. It was performed by Dr. Bantock on December 21st, 1887. As I assisted the operator, I had the advantage of being able to note the extremely complicated relations of the tumours which were discovered.

When the abdominal cavity was laid open the smaller tumour, which lay to the left, looked like a coil of small intestine adherent to a cyst. It was tapped, and clear, glairy, apparently ovarian fluid escaped. The coil proved to be the left Fallopian tube, dilated. The cyst below it was drawn with great difficulty out of the abdomen, for it burrowed between the layers of the broad ligament, and had to be enucleated inferiorly. The lower part of this cyst lay close to the side of the body of the uterus, which was above the pubes, and covered in front by the larger tumour. The sketch (Woodcut 1) shows these relations, as detected in the course

Woodcut 1.



of the operation (L.P. = level of pubes). The larger tumour lay more in front of the uterus, but I have drawn it as though pushed somewhat outwards in order to display the connections of the left tumour. A pedicle, consisting of the uterine end of the left tube, part of the broad ligament, and a stout band (no doubt the ovarian ligament) running to the cyst, was formed by transfixion close to the uterus. The left tumour was then cut away.

The right tumour proved to be a similar but larger growth, and was treated in a similar manner. It burrowed very deeply into the pelvis, and its removal was exceedingly difficult; its pedicle was transfixed close to the right extremity of the fundus uteri. A

drainage-tube was inserted into Douglas's pouch. The patient made a rapid recovery, the temperature never exceeded 99·6°, and she was discharged in good health on January 11th, 1888.

Before describing the tumours (R. C. S. Mus., Nos. 4584 B and c) I may note that the abdominal viscera exposed during the operation appeared healthy and free from inflammatory or neoplastic deposits, and that the peritoneal cavity contained no free fluid.

The tumours are represented in Plate XII, figs. 1 and 2. In describing them I am unable to give very precise measurements. They were very large as they lay in the body distended with fluid, but shrank considerably after removal and preservation in spirit, though I have counteracted the shrinking, to a certain extent, by stuffing the cystic cavities with wool before immersing the specimens in dilute methylated alcohol.

The right tumour weighed 7½ oz. when fresh, and contained over a pint of fluid. As now preserved the uterine half of the tube (fig. 1, *a*, *b*) is stretched and tortuous, its walls are very thick, and its mucous membrane bears small papillomata, which were more conspicuous and highly vascular when the specimen was fresh. This part of the tube is invested by the broad ligament much thickened by old inflammation. The outer half of the tube is dilated, forming an oval cyst measuring in its present half-collapsed condition over four inches horizontally by about two and a half vertically. It communicates with the uterine half by a crescentic valvular orifice (*c*). A similar condition is seen in Woodcut 9, p. 242, in the thirty-eighth volume of the 'Transactions' (1887), which represents a tubo-ovarian cyst, developed as a result of chronic inflammation. Large papillomatous masses (*d*) grow from the mucous membrane of this dilated portion of the tube. In its extremely thickened walls, a short distance below the valvular orifice, is a cyst, which, when fresh, contained nearly one drachm of yellowish glairy fluid without any pus-corpuscles. Papillomatous outgrowths (*e*) spring from the lining membrane of this cyst, which may have developed from one of the pouches or cavities formed in the "follicular salpingitis" of Martin.[1]

[1] "Ueber Tubenerkrankung," 'Zeitschrift für Geburtshülfe,' vol. xiii, part 2. The "follicular depressions" of Martin may be produced by the union of the edges of secondary plicæ through inflammatory adhesion. I have seen this condition in a section prepared by Dr. Griffith from a tube removed during life. In the present case, however, the cyst is separated from the main cavity of the

Below the dilated part of the tube lies the ovary (*f*) reduced to a single cyst, almost spherical, and about four inches in diameter. Its lining membrane bears, at certain points, very fine, almost villous papillary elevations. This cystic ovary does not communicate with the dilated part of the tube, to which, however, it is intimately adherent. At the area of adhesion I detected signs of atrophy of the cyst wall, and a distinct valvular elevation appeared to mark the breaking-down either of a secondary cyst or of the main wall, as so often seen in large multilocular ovarian cysts. This appearance, which is not clearly displayed in the specimen as permanently mounted, indicates the first stage in the formation of a true tubo-ovarian cyst as a result of chronic inflammation of the appendages (see Woodcut 9, 'Transactions,' vol. xxxviii, above referred to). From what I have observed (ibid., p. 243), dilated tubes and ovaries which have become cystic through inflammatory changes, may, I conclude, fuse together to form tubo-ovarian cysts. Thus a tubo-ovarian cyst arising in this manner represents an atrophic process following inflammation; this theory will be further considered. I admit that Dr. Griffith has noted that, according to minute descriptions of specimens of tubo-ovarian cyst already published, no mention is made of any appearances which show that the tubal and cystic cavities have united in this manner.[1] In this particular case I am speaking solely of tubo-ovarian cysts developed as a result of chronic inflammation.

This cystic ovary burrowed deeply into the layers of the pelvic peritoneum, whence it was enucleated during the operation. All trace of ovarian tissue has disappeared, as is the rule early in the development of papillomatous cystic disease of the ovary.[2]

The left tumour (fig. 2) weighed 3 oz. when fresh, and contained a quarter of a pint of fluid. As here preserved the uterine half of the tube (*a*, *b*) measures about three inches in length. It

tube by part of the thickened tubal wall, and therefore must have been otherwise developed.

[1] "Tubo-ovarian Cysts," 'Trans. Obstet. Soc.,' vol. xxix. For a description of tubo-ovarian cysts in London museums see my observations in the discussion on Dr. Griffith's paper, ibid., p. 302.

[2] "Papillary Cysts of the Ovary," 'Transactions,' vol. xxxiii, p. 207. Plate IX, fig. 2, represents a cyst bearing fine papillomatous growths resembling those which spring from the wall of the cystic ovary in the present case, though not indicated in the drawing.

dilates suddenly and has been laid open since the operation posteriorly as far as the dilatation. The mucous membrane, intensely vascular when recent, bears no papillary growths; the muscular and serous coats are much thickened. The outer half of the tube, greatly distended with fluid before removal by operation, bends forwards from the dilated part of the inner half at *c*, and then curves upwards and backwards (*d*, *e*), becoming yet more dilated, and ending on the surface of the ovary. The line of demarcation at *f* is still perceptible, but was more strongly marked in the recent state. All the outer half of the tube bears masses of papilloma. The ovary is dilated into a single cyst (*g*) hardly two inches in diameter, but originally much larger. Its lining membrane bears papillomata more developed than in the cystic ovary on the other side, some forming polypoid growths springing from short pedicles. This ovarian cyst does not communicate with the dilated tube. It was partly shelled out of the pelvic peritoneum during the operation, and some of the serous membrane still invests the cyst at the back of the specimen as now mounted. This piece of peritoneum removed with the cyst was so thickened that I took it at first for normal ovarian tissue, but found no such tissue on careful search. The ovarian ligament formed a short stout cord when the specimen was fresh, but it has shrunk up in process of preparation, and lies on the under and inner part of the cyst, unrecognisable to any person who has not had the opportunity of examining the specimen when fresh. I took care to note minutely the relations of all the structures as displayed during operation, and also after the removal of the specimens whilst they were still fresh. I admit that now they are hard to recognise. The papillomata have shrunk everywhere, and the characteristic appearance caused by their vascularity when fresh has entirely disappeared.

Thus there is papillomatous disease of both tubes and ovaries, but no true tubo-ovarian cyst on either side, although the conditions under which a cyst of that kind is most frequently developed were present (see 'Transactions,' vol. xxxviii, p. 241), and, indeed, in this case had no operation been performed the tubal and ovarian cysts might have ultimately opened into each other.

The papillary growths in the right tumour closely resembled those in the case of papilloma of the Fallopian tube which I described in the 'Transactions,' vol. xxxi, p. 174, but are not so generally diffused over the tubal mucous membrane. In the left

tumour they are rather finer even in the part of the tube near *e*, fig. 2, and certainly finer still in the ovary *g*, where, when fresh, they looked and felt like hard, brittle warts. Fig. 3 represents the microscopical appearances of a piece of papilloma from *e*, fig. 2. The papillæ are fine and elongated, villiform in fact; some are branched. They bear a distinct investment of columnar epithelium, but I failed to detect cilia; however, the specimen has certainly suffered from remaining immersed in water for several hours after the operation, and the epithelium shows signs of detachment by maceration in many places. Under these circumstances, cilia, as every microscopist knows, disappear.

I speak of these growths as papillomata because they consist of very vascular papilliform projections from the mucous membrane and from the lining membrane of the ovarian cysts, and bear epithelium after the fashion of normal papillæ. They are identical with the growths which I described in the thirty-first volume of the 'Transactions,' and the growths described by Dr. Coblenz in his important memoir "Zur Genese und Entwickelung von Kystomen im Bereich der inneren Sexualorgane," published in Virchow's 'Archiv,' vol. lxxxiv, 1881, and in his "Das Ovarialpapillom," ibid., vol. lxxxii, 1880. Mr. Bland Sutton and myself have since the appearance of these papers made fresh researches in the same direction, but to Dr. Coblenz is due the honour of having first clearly demonstrated the pathological and morphological significance of papilloma of the ovary as a disease perfectly distinct from the common multilocular ovarian cyst. The growths on the surface of the tubal mucous membrane resemble the growths in the ovary which the above-named observers, as well as myself, have uniformly described as papilloma, and differ greatly from the adenomatous vegetations which grow within the loculi of many multilocular ovarian cysts. How far tubal and ovarian papilloma have any relation will presently be discussed.

This case is the third where papilloma of the Fallopian tube can be said to have constituted a distinct disease. In all these cases there was evidence of previous pelvic inflammation. In the first case ('Trans. Path. Soc.,' vol. xxxi, and Mus. R. C. S., Path. Series, No. 4584), where the papillomatous growths were exuberant, the ostium of the affected tube was patulous, and ascites was present; the corresponding ovary was not enlarged. In the second ('Trans. Obstet. Soc.,' vol. xxviii) the affected tube was closed and

there was no ascites, the growths were exuberant, the ovary was embedded in adhesions, and was apparently free from papillomatous disease. In the third case, above described, the disease affected both tubes, which were closed, and there was no ascites, the growths were less exuberant; both ovaries were papillomatous. The first case is yet living, though the late Professor Schröder, who referred to it,[1] believed that the papilloma was evidently malignant. The second died on the fourth day after operation. The disease certainly did not appear to be malignant either in this or in the third case. The significance of ascites I have already discussed at length ('Trans. Obstet. Soc.,' vol. xxviii); in the case here described it was absent because, or at least chiefly because, neither tubes were patent towards the ostium.

The relation of papilloma of the ovary to papilloma of the tube may next be considered. There is no directly pathological relation between the two diseases. Papilloma of the ovary apparently arises from relics of the parovarium which are found in the hilum of the ovary (paroöphoron) or even stray into the ovarian parenchyma proper among the follicles. I have demonstrated this theory in papers which are published in the thirty-second, thirty-third, and thirty-fourth volumes of the 'Transactions.' No such relics enter into the tissues of the Fallopian tube, where papillomatous disease appears more evidently as a result of inflammation. Yet although papilloma of the ovary is more essentially a tumour in its clinical characters (however it may differ from the common multilocular cyst pathologically), there is evidence that it may follow old pelvic inflammation. There was "uncontrollable menorrhagia," and other symptoms of what is generally termed "chronic disease of the appendages," in one of the cases which I have described in the 'Transactions.' In the case which forms the subject of this paper, the history of pelvic inflammation was very clear.

Turning to the condition of the tubes in this case, there can be little doubt that it was due to the pelvic inflammation. Mr. Sutton has frequently detected a slightly papillomatous condition of the tube caused, he believes, by the extension of gonorrhœa from the lower part of the genital tract. Dr. Bumm, I may here remark, claims to have discovered that the pathology of "unmixed"

[1] 'Die Krankheiten der weiblichen Geschlechtsorgane,' 7th edition, 1886, p. 361.

gonorrhœa may best be studied in the tube rather than in the vulva or the vagina, since the gonoeoeei readily reach the tube, whilst the pyogenic streptoeocei, which so often enter gonorrhœal discharges in the vagina ("mixed" or "compound infection"), seldom pass upwards into the higher portions of the genital tract.[1] Mr. Sutton has no doubt "that the growths of the tube are in nature warts, similar in principle to those found in other situations, namely, overgrown papillæ, the result of continued irritation." In the ease of the tube the papillomata are "no doubt . . . . simply enlarged and overgrown rugæ characteristic of its mueous membrane" ('Trans. Obstet. Soc.,' vol. xxviii, p. 247). I have already referred to Dr. Martin's "follicular salpingitis."

From what has been said in the two preceding paragraphs I infer that there was, in this ease, a more or less simultaneous papillomatous degeneration of the tubes and ovaries due to a eommon eause, the attaek of severe pelvic inflammation seven years previous to the operation. Ever since the inflammatory attack the patient suffered more or less, the eatamenial functions being permanently deranged. Whether the attack represented gonorrhœal infection or not must remain obscure. The papilloma of the tubes and ovaries represent, I believe, an essentially atrophie condition, like the tubo-ovarian eyst which I described in the thirty-eighth volume of the 'Transaetions' as the result of chronic inflammation. In the present case the atrophic eystie ehanges were also proeeeding in the direction of the development of tubo-ovarian eysts, especially on the right side, as I have already indieated, though I do not wish to be too positive on that point.

I do not think that the disease could have been eongenital. Dr. Griffith, in the monograph already quoted, gives reasons for supposing that some forms of tubo-ovarian cysts are congenital. In this ease there is no tubo-ovarian cyst on either side, though the eondition appears to be developing on both. The patient menstruated regularly before the attack of pelvic inflammation, and the previous sterility may be explained by many more probable theories than the supposition of congenital malformation.

February 21*st*, 1888.

1 "Ueber gonorrhoiseiie Miseiiinfeetioneii beim Weibe," 'Deutsche med. Wochenschrift,' Deeember 8th, 1887.

PRINTED BY ADLARD AND SON, BARTHOLOMEW CLOSE.

"Dunrobin"
Pinner
Dec. 8. 1909

Dear Dorner,

I will endeavour to ascertain what has become of my patient Railton whose tubes you say were removed in Dec 1889.

I have not been able to get at the Case Book for the address, but hope to do so this afternoon.

Kind regards,

Yours sincerely

Jos Granville Bantock

"Runnymede"

Penns

Dec. 10. 1907

Dear Dorn

I have found the
Cure book for Mrs Railton.
At the period of the
operation she kept a
small general shop
at 36 Langham St
Stockwell
This so long ago that
I fear there will be
difficulty in tracing her
Will you remember Bake to

do this?

Kind regards,

Yours sincerely,

Jacqueline Bouvier

Re-examination of the Specimens in December 1909

In Dec. 1909, when engaged in re-arranging the specimens
the figures. above, R.C.S. asked Prof. Shattock & Dr Beadles
make fresh sections of the affected parts. The best
section is indicated in pencil on Plate XII in this
period. Fig 1 includes the whole thickness of the
the dura the inferior of the section secured to the
cut-edge of the malleus and. (N.B. fig 3. M. was well
removed from the specimen)

DESCRIPTION OF PLATE XII.

To illustrate Mr. Alban Doran's case of Papilloma of both Fallopian Tubes and Ovaries.

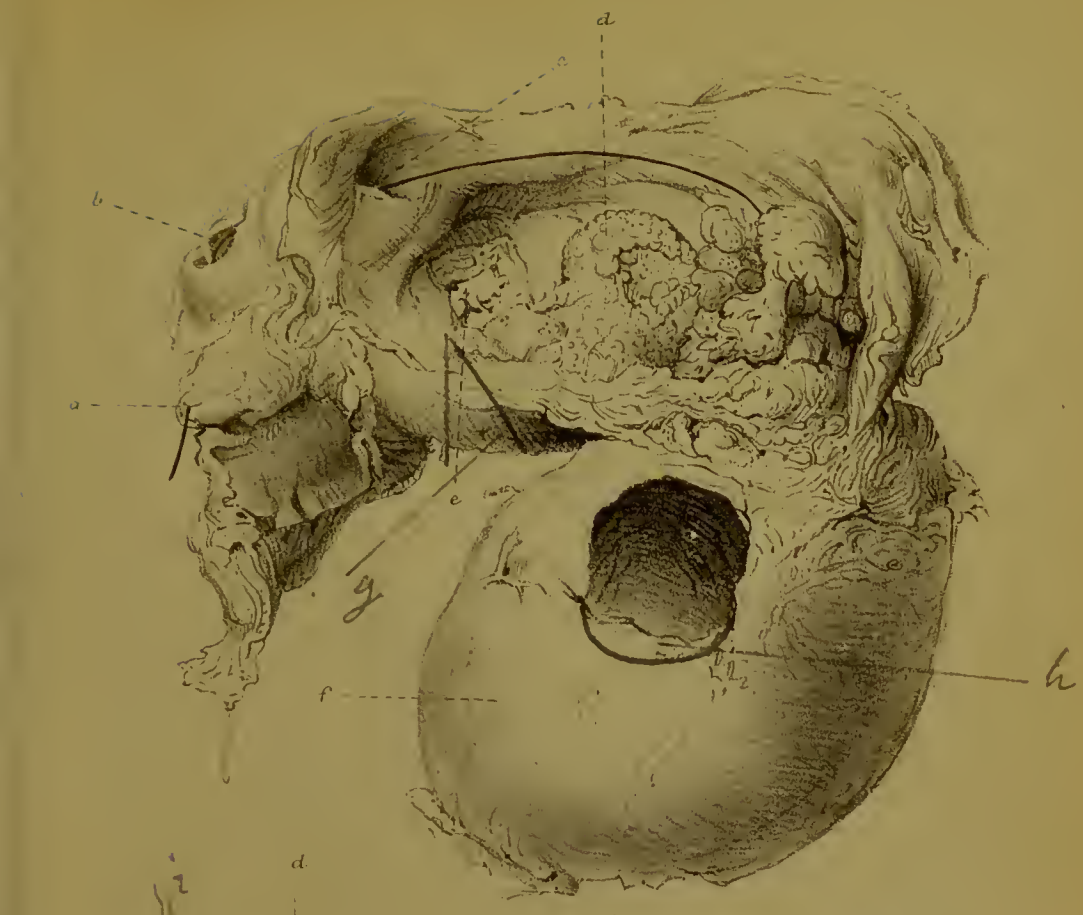
From drawings by Mr. H. R. W. Lewin.

FIG. 1.—Right tumour, seen from behind. *a*. Cut end of the Fallopian tube, which was divided close to the right extremity of the fundus uteri. *b*. Inner half of the tube laid open, showing its thickened walls; it winds along the back of the specimen (as here placed), and its cavity, laid open, is only visible to a limited extent in this drawing. Below it lie the thickened layers of the broad ligament. *c*. Valvular opening between *b* and the dilated part of the tube, which is completely exposed, showing (*d*) masses of papillomata, and (*e*) a cavity in its thickened walls also bearing papillomatous growths. A bristle has been passed through *a*, *b*, and *c*, and rests against a papillomatous mass. *f*. The right ovary, forming a uuilocular cyst which does not communicate with the tube. The small papillomatous growths on its inuer wall are uot indicated. ($\frac{2}{3}$ nat. size.)

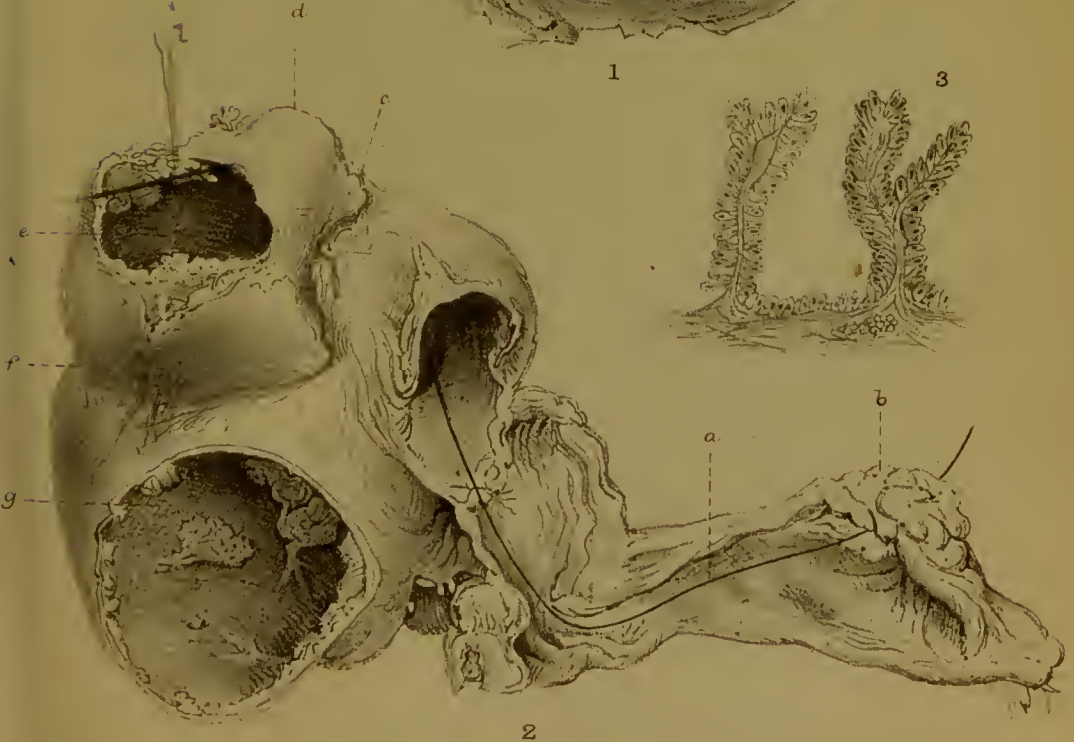
FIG. 2.—Left tumour, seen from behind. *a*. Uterine half of the Fallopian tube laid open from *b* (where it was cut through, close to the left extremity of the fundus uteri) up to its dilated portion, and traversed by a bristle. *c*, *d*, *e*. Outer portion of tube curving forwards (at *c*), then upwards (at *d*), then backwards (at *e*): This portion contained masses of papillomata; some are indicated in the drawing at the upper and lower border of the hole cut in the tube at *e*. *f*. Outer limit of the line of demarcation betweeu the tube and the ovary. *g*. Left ovary dilated into a single cyst bearing papillary growths, some pedunculated. (Nat. size.)

FIG. 3.—Microscopic section of a papillomatous outgrowth from *e*, Fig. 2, as seen under a low power. The papillæ are very fine, like villi, aud bear columnar epithelium; one papilla is branched.

Fig 1 a wedge shaped piece of tissue, including the whole thickness of the Tube, cut away in wax-bowl of Mes Dec. 1909. La piece of the wall of the cystic ovary (?) also cut away
Fig 2 i. piece of cyst wall also cut away with Papilloma



1



2

3

H.R.W.L. del

West, Newman & Co. lith.

20 MAR 19
LIBRARY